

## TWO NEW SOUTH AMERICAN JAGUARS.

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The series of jaguars in the collection of the United States National Museum now includes, besides numerous zoological park specimens, the skulls of 36 wild-killed animals. A study of this material gives a very good idea of the individual variation in the skull, and of some of the local forms of this great cat. In addition to the three forms recognized by Dr. E. A. Mearns from north of Panama, three well-marked South American species are represented in the collection, two of which appear to be without names. The most important characters distinguishing these forms were pointed out by Doctor Mearns in his paper.<sup>1</sup>

### FELIS PARAGUENSIS, new species.

*Type*.—United States National Museum No. 4128, skull of male adult (basal suture closed); collected in Paraguay by Capt. T. J. Page, United States Navy. Catalogued June, 1860.

*Characters*.—Skull largest of the jaguars, much larger than skull of *Felis onca* from Brazil (and exceeding in measurements the largest Corean tigress skull examined), elongated and comparatively low crowned, with very high and strongly developed sagittal crest; audital bullae large and greatly inflated, angular and flattened on surfaces, completely filling space to the mastoid and paroccipital processes, almost twice the bulk of the bullae in any Brazilian specimen. Teeth actually slightly larger, but relatively of about same size as in *onca*.

*Measurements*.—Type skull compared with a slightly older male from Santarem, Brazil, the latter in parentheses: Greatest length, 303 (269) mm.; condylobasal length, 265 (234); zygomatic breadth, 196 (183); median line nasals, 61.7 (56.6); center of crown to tip of premaxillary bones, 146 (137); center of crown to maxillary tuberosity, 117 (108); audital bulla, 40.5 by 37 (30.2 by 29.8). Teeth: Length  $pm^3$ – $pm^4$ , 48.3 (45.2); upper carnassial, 28.8 by 15.2 (26.6 by 15.2). Skull of adult female from Paraguay: Greatest length, 248 mm.; condylobasal length, 220; zygomatic breadth, 179; length  $pm^3$ – $pm^4$ , 42.5.

*Remarks*.—This form is based on two skulls from Paraguay. These have been compared with six skulls of true *onca* from Brazil and Venezuela, all of which, with one exception, are very uniform in

<sup>1</sup> The American Jaguars, Proc. Biol. Soc. Washington, vol. 14, pp. 137–143, Aug. 9, 1901.

size and characteristics, including the presence of the wide sulcus between the mastoid process and the audital bulla. The single exception, an adult male skull collected by Captain Page at Lake Ubiraba, between Bolivia and Matto Grosso, Brazil, August, 1859, resembles the skulls from the Amazon region in every particular, except that it is much higher crowned (center of crown to maxillary tuberosity, 114.5) and has considerably greater postorbital and interorbital breadth. It shows no approach in characters toward the Paraguay skulls.

Fitzinger<sup>1</sup> based a name, *alba*, principally on references to accounts of jaguars from Paraguay, but the name is preoccupied by *Felis alba* Fischer<sup>2</sup> for a tiger. The *Felis nigra* of Erxleben is a synonym of *Felis onca*.

FELIS NOTIALIS, new species.

*Type*.—United States National Museum No. 4361, skull of [male] adult (basal suture obliterated); collected at San Jose, Entre Rios, Argentina, August, 1860, by Capt. T. J. Page, United States Navy.

*Characters*.—Skull small, very much smaller than in the neighboring form, *Felis paraguensis*, and slightly less in size than in true *onca*, much lower crowned and less arched; interorbital constriction less; nasals longer; antorbital foramina more rounded, less oval; squamosal arm of zygoma weaker; anterior opening of nares smaller, more rounded; audital bullae very low and little inflated, with wide space between them and rims of mastoid and paroccipital processes. Premolars very large, larger than in the much greater Paraguay form, but canines relatively smaller.

*Measurements*.—Type skull: Greatest length, 264 mm.; zygomatic breadth, 176; median length nasals, 65.3; center of crown to tip of premaxillary bones, 141; center of crown to maxillary tuberosity, 102. Teeth: Length  $pm^3$ – $pm^4$ , 49.9 [in male *onca*, 43.8–47.5]; upper carnassial, 30.7 by 15.5 [in *onca* 26.6–28.2 by 14.6–15.3].

*Remarks*.—This form is based on a single specimen. Compared with six skulls of true *onca*, this specimen is at once distinguishable by its much larger carnassials and the peculiarly low audital bullae. The form represented is even more widely different from its nearest neighbor, the giant Paraguay species with the swollen bullae, than from the Brazilian *Felis onca*.

EXPLANATION OF PLATE 5.

Audital bullae of jaguars (natural size).

Fig. 1. *Felis onca*, Cat. No. 49393, U.S.N.M., Amazon River near Santarem, Brazil. Collected by Clarence B. Riker.

2. *Felis paraguensis*, Cat. No. 4128, U.S.N.M., Paraguay. Collected by Capt. T. J. Page. Type-specimen.

<sup>1</sup> Sitz.-ber. Kais. Akad. Wiss. Wien, vol. 59, 1 Abth., pp. 218–220, 1869.

<sup>2</sup> Syn. Mamm., p. 566, 1829.